

REMARKS

In the final Office Action dated December 3, 2009, the Examiner rejects claims 1-3, 5 and 6 under 35 U.S.C. § 112, second paragraph, as being indefinite and rejects claims 1-3, 5-9, 11-15, 17-23 and 25 under 35 U.S.C. §103(a). With this Amendment, claims 1-3, 5, 7-9, 13-15 and 19-23 are amended. After entry of this Amendment, claims 1-3, 5-9, 11-15, 17-23 and 25 are pending in the application. Reconsideration of the application as amended is respectfully requested. Entry of the Amendment is requested after final as it resolved all outstanding issues with respect to the pending claims.

Response to rejections under 35 U.S.C. §112

Claims 1-3, 5 and 6 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter that Applicant regards as the invention. The Examiner contends that the phrase “vehicle cannot move” is unclear because a vehicle can always be moved. The phrase has been amended as suggested by the Examiner to “vehicle is not moving.” Applicant submits that the rejection has been overcome.

Response to rejections under 35 U.S.C. §103(a)

The Examiner rejects claims 1-3, 5, 7-9, 11, 13-15, 17, 19, 20, 22, 23 and 25 under 35 U.S.C. §103(a) as being unpatentable over Kanamori et al. (Japanese Patent Publication S62-146745 using English abstract and figures) in view of Ohki et al. (U.S. Publication 2002/0033297).

Independent claim 1 (and claims 2, 3, 5-9, 11 and 12 by their dependency) and independent claim 13 (and claims 14, 15, 17 and 18 by their dependency) as amended recite in general an automatic driving position adjustment system comprising (a) a first adjustable component adjustable by an operator, the first adjustable component configured to adjust in a plurality of bi-directions; (b) a plurality of additional adjustable components each configured to adjust in a plurality of bi-directions; (c) a controller configured to receive vehicle signals and determine at least an interlocked state, wherein the vehicle is not moving, and a non-interlocked state, wherein the vehicle is moving, from the vehicle signals; (d) a plurality of movement-distance sensors, one movement-distance sensor associated with each bi-direction that the first adjustable component can move, wherein the movement-distance sensors each

generates an output signal indicative of a distance and direction moved to achieve a new position of the first adjustable component, wherein the controller, when in the interlocked state, is responsive to the output signal of the movement-distance sensors and is configured to compute a new position of each of the plurality of additional adjustable components on the basis of the new position of the first adjustable component, and based on each new position, calculates the distance and direction each movement-distance sensor must move its associated additional adjustable component to achieve the new position, and wherein the controller, when in the non-interlocked state, is not responsive to the output signal of the at least one movement-distance sensor; and (e) a motor associated with each bi-direction of each adjustable component, wherein the controller actuates each of the motors associated with the additional adjustable components when in the interlocked state, to move the additional adjustable components in the calculated direction the calculated distance to obtain the new positions.

Claims 1 and 13 have been amended to clarify that “plurality of directions” means “plurality of bi-directions.” Plurality of bi-directions means that the component can move, for example, a first bi-direction (back and forth) and a second bi-direction (up and down). Support for this amendment is found in paragraphs [0021], [0025], [0027] and [0030].

Claims 1 and 13 have also been amended to clarify that there is a movement-distance sensor associated with each bi-direction that the first component is capable of moving. The claims have also been amended to clarify that each sensor detects the distance and direction of the bi-direction that the component moves. Support for these amendments is found in paragraphs [0022], [0026], [0027] and [0030]. The position of the components is supported by paragraph [0019].

Claim 1 has also been amended to clarify that there is a motor associated with each bi-directional movement-distance sensor. Support for this is found in paragraph [0031].

Kanamori et al. fails to disclose (a) a first adjustable component adjustable by an operator, the first adjustable component configured to adjust in a plurality of bi-directions. Kanamori et al. discloses a seat that slides forward and rearward, in other words, a single bi-direction, as indicated by the seat slide rotation sensor 15.

Kanamori et al. fails to disclose (b) a plurality of additional adjustable components as noted by the Examiner. In addition, Kanamori et al. fails to disclose that its

pedal is configured to adjust in a plurality of bi-directions. As noted by the Examiner, the pedal moves back and forth, a single bi-direction.

Kanamori et al. fails to disclose (d) a plurality of movement-distance sensors. Kanamori et al. only discloses sensor 15. Kanamori et al. also fails to disclose that the movement-distance sensors each generate an output signal indicative of a distance and direction. The sensor 15 of Kanamori et al. detects only a number of rotations in the B direction.

Ohki et al. discloses a system that first determines the incline of the driver's seat. If the incline is not within a "driving" range and the vehicle speed is above a certain point, the controller automatically moves the seat back and the pedal back at the same time to separate them. (Col. 5, line 47- col. 6, line 9). Both the seat and the pedal are only controlled in a single bi-direction. When the seat is determined to be reclined within the "driving" position, the seat and pedal are again moved simultaneously based on predetermined curves programmed into the controller. The seat and pedal again are only programmed to move in a single bi-direction. The controller does not control the up/down movement of the seat or the recline position of the seat. (Col. 6, ll. 16-42). If the driver manually slides the seat forward or back, the pedal is automatically adjusted forward or back. (Col. 6, line 66- col. 7, line 5). Again, only a single bi-direction is controlled. The telescopic position of the steering wheel is adjusted in accordance with the slide position of the seat based on a safety characteristic curve. (Col. 7, ll. 7-10). Again, both the seat and the steering wheel are only automatically controlled in a single bi-direction. The distance between the steering wheel and seat and the safety curve determine whether they will be moved back or forth. (Col. 7, ll. 21-33).

Ohki et al. fails to disclose (b) a plurality of additional adjustable components each configured to adjust in a plurality of bi-directions. Ohki et al. discloses a pedal and a mirror each moving only in a single bi-direction. The steering wheel may be capable of moving in multiple directions; however, Ohki et al. only discloses controlling the telescopic movement of the steering wheel. At the most, Ohki et al. only discloses one additional adjustable component configured to adjust in a plurality of bi-directions.

Ohki et al. fails to disclose (d) the movement-distance sensors of the first component each generating an output signal indicative of a distance and direction moved to achieve a new position of the first adjustable component. As noted above, the controller in Ohki et al. reads the position of the recline and slide position. Sensors do not output to the

controller the distance and direction moved.

Ohki et al. fails to disclose a controller that, when in the interlocked state, is responsive to the output signal of the movement-distance sensors and is configured to compute a new position of each of the plurality of additional adjustable components on the basis of the new position of the first adjustable component, and based on each new position, calculates the distance and direction each movement-distance sensor must move its associated additional adjustable component to achieve the new position, and wherein the controller, when in the non-interlocked state, is not responsive to the output signal of the at least one movement-distance sensor. Ohki et al. discloses the controller only relying on the slide sensor of the seat, the pedal sensor and the telescopic sensor of the steering wheel to determine a safe distance between the seat and pedal and the seat and steering wheel as described above. No other sensor of the seat in Ohki et al. generates a distance and direction moved that is used by the controller to calculate a new position of another component.

The combination of Kanamori et al. and Ohki et al. fails to teach, suggest or render obvious at least the limitations of (b) and (d) in claim 1 and (b), (c) and (d) of claim 13. Accordingly, Applicant submits that claims 1 and 13 are allowable over the cited references.

Claims 2, 3, 5-9, 11 and 12 depend from claim 1 and claims 14, 15, 17 and 18 depend from claim 13 to include all of the limitations therein. Claim 2 has been amended to include sensors associated with each component that communicates with the controller. Support for this amendment is in paragraphs [0022], [0026], [0027], and [0030]. Claims 3, 9 and 15 have been amended to clarify that the prescribed coefficient is based on a predetermined relationship between each additional adjustable component and the first adjustable component. Support for this change is found in paragraph [0049]. Claim 5 has been amended to include when the non-interlock state occurs as described in paragraph [0045] of the specification. Claim 7 has been amended into dependent form to depend from claim 1.

Claims 2, 3, 5-9, 11, 12, 14, 15, 17 and 18 are not taught, suggested or rendered obvious by the combination of Kanamori et al. and Ohki et al. at least based on their dependency from claim 1 or claim 13. Accordingly, Applicant submits that these claims are allowable.

Claim 19 (and claims 20-23 and 25 by their dependency) as amended recites a

method comprising (a) detecting each direction and an associated distance of operator-actuated adjustment for each of the plurality of bi-directions to achieve a new position of the first adjustable component; (b) determining an interlocked state wherein the vehicle is not moving or a non-interlocked state wherein the vehicle is moving; (c) when the interlocked state is determined, computing a new position of each additional adjustable component corresponding to the new position of the first adjustable component, each new position requiring directions and associated distances of adjustment for each of the plurality of bi-directions that the plurality of additional adjustable components are to undergo on the basis of the detected adjustment of the first adjustable component; and (d) moving the additional adjustable components each direction and associated distance of adjustment required to obtain its new position.

As explained above, the combination of Kanamori et al. and Ohki et al. fails to teach, suggest or render obvious at least elements (a) and (c) of claim 19. Accordingly, claim 19 and claims 20-23 and 25 dependent therefrom are allowable over the cited references.

The Examiner rejects claims 6, 12, 18 and 21 under 35 U.S.C. § 103(a) as being unpatentable over Kanamori et al. in view of Ohki et al. and Wang (U.S. Publication 2004/0109247).

Claims 6 and 12 depend from claim 1, claim 18 depends from claim 13 and claim 21 depends from claim 19 to include all of the limitations therein. As explained above, claims 1, 13 and 19 are not taught, suggested or rendered obvious by the combination of Kanamori et al. and Ohki et al. Therefore, Wang must cure the deficiencies of the combination to render the independent claim obvious before considering the obviousness of the dependent claims. However, Wang fails to cure the deficiencies of the combination as Wang fails to disclose at least (b) and (d) of claim 1, at least (b), (c) and (d) of claim 13, and at least (b) and (c) of claim 19. Accordingly, the combination of Kanamori et al., Ohki et al. and Wang fails to teach or suggest the independent claims and those that depend therefrom. Therefore, claims 6, 12, 18 and 21 are allowable over the cited references.

Conclusion

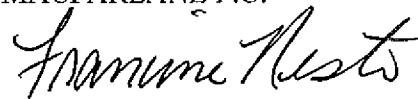
It is submitted that this Amendment has antecedent basis in the Application as originally filed, including the specification, claims and drawings, and that this Amendment

does not add any new subject matter to the application. Reconsideration of the Application as amended is requested. It is respectfully submitted that this Amendment places the Application in suitable condition for allowance; notice of which is requested.

If the Examiner feels that prosecution of the present Application can be expedited by way of an Examiner's amendment, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,

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